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LIME REPORT

1930-1931

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Director—Chief Chemist

BUREAU OF FOODS AND CHEMISTRY



JOHN A. McSPARRAN, *Secretary of Agriculture*

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LETTER OF TRANSMITTAL

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF AGRICULTURE
BUREAU OF FOODS AND CHEMISTRY

Harrisburg, February 10, 1932.

Hon. John A. McSparran,
Secretary of Agriculture,
Harrisburg, Pennsylvania.

Dear Sir:

I have the honor to transmit herewith for your approval a report, showing the results of chemical analyses of official samples of lime products selected by Special Agents of the Bureau from sales agencies throughout the Commonwealth during the Spring and Fall shipping seasons of 1930 and 1931, as provided by the Lime Law, Act of June 1, 1915, together with a list of the brands registered for 1931 sales.

It is recommended that this report be published in bulletin form for distribution.

Very respectfully,

JAMES W. KELLOGG,
Director-Chief Chemist



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LIME REPORT 1930-1931

INTRODUCTION

The Lime Law, Act of June 1, 1915, requires all Lime Products offered for sale in Pennsylvania for agricultural purposes to be registered for each calendar year, all sacks or attached cards or cards attached to bins in the case of bulk sales to be printed with brand or trade names, names and addresses of manufacturers or importers, the net weight of the contents of packages and guarantees for the minimum percentages of Calcium Oxide and Magnesium Oxide which they may contain. In the case of the Carbonates of Lime, Pulverized Limestone, Ground Oyster Shell and Artificial Carbonate of Lime, guarantees are also required for the minimum percentages of Calcium Carbonate and Magnesium Carbonate, equivalent to the guarantees for the Calcium and Magnesium Oxides, together with the size of sieve mesh through which the coarsest particles will pass upon sieving. Provision is made for enforcement by authorizing the inspection of methods of sales, the collection and analyses of official samples, the publication of results of examination for the information of the public and for holding responsible all dealers and selling agents who make sales contrary to the requirements. Provision is also made for the analysis of special samples for a fee of \$1.00 each for residents of Pennsylvania. Applications for registration for each calendar year are required to be submitted, showing the brand or trade names of each kind of Lime Product to be registered, together with a statement, showing the number of tons of each sold during a preceding year, the amount of registration fee being at the rate of \$5.00 for each new brand registered and for the re-registration and continued sale of brands sold during a preceding year, the license fee is as follows: For an amount not exceeding 1,000 tons, \$5.00; for an amount exceeding 1,000 tons but not exceeding 5,000 tons, \$10.00; and for an amount exceeding 5,000 tons, \$20.00 for each brand.

Residents of the State submitted during the two-year period 91 special samples of Lime Products, accompanied by a fee of \$1.00 each. These samples were analyzed in duplicate and the reports of the results obtained were mailed with receipts for fees to the persons submitting them and the fees paid to the Comptroller for transmittal to the Department of Revenue and payment to the State Treasurer, as is required. The results of these analyses are not included in this report because they were submitted for the purpose of private information.

During the Spring and Fall shipping seasons of 1930 and 1931 the Special Agents of the Bureau selected 234 official samples, which, together with reports showing the information printed upon sacks or

attached cards covering sales conditions, were submitted for examination. Of this number 227, representing 74 brands, registered by 55 manufacturers and importers, were analyzed for the purpose of checking the correctness of guarantees and to determine the amounts of Calcium and Magnesium Oxides, the active elements effective in neutralizing soil acidity. They included the following classes and number of brands and samples:

<i>Classes</i>	<i>Brands</i>	<i>Samples</i>
Pulverized Limestone	19	65
Pulverized Oyster Shell	3	3
Artificial Carbonate of Lime	1	16
Lime	6	8
Hydrated Lime, low magnesia	31	102
Hydrated Lime, high magnesia	14	33
<hr/>		
Total	74	227

BRANDS REGISTERED AND TONNAGE SALES

There were 187 brands of Lime Products registered by 91 manufacturers and importers for 1930 sales, for which 101 lime licenses were issued. For 1931 sales there were 185 brands registered by 97 companies, for which 103 licenses were issued. A list of the brands registered for 1931 will be found in the following pages.

In accordance with the requirements, tonnage sales figures were included with applications for registration covering the Lime Products registered for 1930 and 1931, showing the tonnage sales made during the preceding years of 1929 and 1930, the total tonnages disposed of being respectively 254,336 and 245,330. The number of tons sold during these periods of the several classes of Lime Products were as follows:

	1929	1930
Limestone	109,751	100,982
Artificial Carbonate	16,658	15,220
Marl	2,437	1,935
Oyster Shell	1,694	1,418
Hydrated	86,953	87,783
Burned	28,070	30,304
Gypsum	196	79
Miscellaneous	8,577	7,609
<hr/>		
Total tonnage	254,336	245,330

CONCLUSIONS

The results of chemical analyses of the 227 official samples showed that 40, or 17.6 per cent., were deficient in calcium oxide and 32,

or 14.1 per cent., were deficient in magnesium oxide to the extent of .50 per cent. or more below their respective guarantees. These deficiencies were about the same as those reported for the official samples examined during the corresponding period of 1928 and 1929. Many of these deficiencies were minor variations from claims made and in a large number of instances were balanced, as where a low calcium oxide was noted the magnesium oxide showed an overage compared with guarantees, the total soil neutralizing effectiveness not varying materially from claims made. Because of variations in the character of the limestone deposits, it is difficult to fix guarantees for calcium and magnesium oxides, which will be found to closely represent composition under all conditions, which will, in a measure, explain the reasons for variations in uniformity of composition for Lime Products.

PULVERIZED LIMESTONE. There were 65 samples of this class, representing 19 brands, registered by 17 companies. The results of analyses varied from 30.92 to 54.88, averaging 49.91 per cent. calcium oxide, being equivalent to 55.16 and 97.90, averaging 89.03 per cent. calcium carbonate. The magnesium oxide varied from .43 to 22.21, averaging 2.90 per cent., being equivalent to .90 and 46.45, and an average of 6.06 per cent. magnesium carbonate. The acid insoluble matter varied from .16 to 24.68 and averaged 5.15 per cent. The size of the sieve mesh, through which all of the particles would pass upon sieving, was found to vary from a No. 10 to a No. 100, averaging a fineness of passing a No. 30 mesh sieve. There were 19 samples deficient in calcium oxide and 4 in magnesium oxide. The retail selling values were from \$4.05 to \$9.40, averaging \$6.57 a ton.

PULVERIZED OYSTER SHELL. There were only 3 samples of this class of Lime Products, representing 3 different brands, registered by as many companies, which showed variations in composition of from 42.90 to 50.19, averaging 47.08 per cent. calcium oxide, being equivalent to 76.53 and 89.53, averaging 83.99 per cent. calcium carbonate. The magnesium oxide varied from .41 to .70, averaging .55 per cent., being equivalent to .86 and 1.46, averaging 1.15 per cent. magnesium carbonate. The insoluble matter ranged from 3.74 to 16.66, averaging 9.48 per cent., and the sieve mesh tests showed that all of the sample would pass, upon sieving, a No. 10 or a No. 20, averaging a No. 17 size sieve mesh. One sample was found deficient in calcium oxide. The selling values were from \$7.50 to \$10.60, averaging \$9.05 a ton.

ARTIFICIAL CARBONATE OF LIME. The 16 samples representing only 1 brand were found to vary from 39.86 to 50.14, averaging 45.56 per cent. calcium oxide, being equivalent to 71.11 and 89.44,

averaging 81.27 per cent. calcium carbonate. The magnesium oxide varied from 3.61 to 9.62, averaging 6.05 per cent., being equivalent to 7.55 and 20.12, averaging 12.65 per cent. magnesium carbonate. The insoluble matter showed variations from 1.20 to 4.18 and averaged 2.60 per cent. Tests for degrees of fineness showed variations from a No. 20 to a No. 40, averaging fine enough to pass a No. 26 mesh sieve. There were 6 samples of this class deficient in calcium oxide and 8 in magnesium oxide. The selling values were from \$6.75 to \$12.00, averaging \$9.73 a ton.

LIME. There were 8 samples representing this class of burned lime, which included 6 brands registered by different companies. The variations in chemical compositions were from 43.93 to 87.69, averaging 62.57 per cent. calcium oxide and from .94 to 30.15, averaging 12.99 per cent. magnesium oxide. The insoluble matter varied from 1.42 to 14.94 and averaged 5.49 per cent. and tests for carbon dioxide, showing the proportion of unburned limestone remaining in the sample, varied from .95 to 13.50 and averaged 5.96 per cent. Five of this class were deficient in calcium oxide and 3 in magnesium oxide. The selling values were from \$4.00 to \$10.00 and averaged \$7.16 a ton.

HYDRATED LIME. Of this class of Lime Products there were 102 samples selected, including 31 brands, registered by 28 companies, representing Low Magnesia Hydrated Lime, and 33 samples, including 14 brands, registered by 11 companies, representing the High Magnesia type. In the Low Magnesia samples the variations in chemical composition were from 51.32 to 73.16, averaging 68.60 per cent. calcium oxide, and from .56 to 16.18, averaging 2.20 per cent. magnesium oxide. The acid insoluble matter varied from .14 to 11.52 and averaged 1.84 per cent. and 7 of these samples were deficient in calcium oxide and 13 in magnesium oxide. The selling values were reported as being from \$7.00 to \$17.00, averaging \$11.82 a ton. In the case of the High Magnesia samples the composition was found to be from 44.24 to 62.74, averaging 48.51 per cent. calcium oxide and from 10.39 to 33.80, averaging 31.50 per cent. magnesium oxide. The insoluble matter varied from .12 to 1.50, averaging .69 per cent. Of this type there were 2 samples deficient in calcium oxide and 4 in magnesium oxide. The brands represented sold for from \$5.50 to \$14.00, averaging \$11.12 a ton.

ACKNOWLEDGMENTS

Mr. V. B. Hausknecht, First Assistant Chemist, in charge of the Chemical Laboratory, had immediate supervision of the reception and chemical analyses of official and special samples, together with the approval of applications for registration and the issuing of licenses. The following Assistant Chemists took part in the analytical work:

Messrs. G. J. Kuhlman, Jr., Claude R. Engle, Frank B. Williams, Harold Y. Fisher and Joseph F. Bradley. The samples were prepared for analysis by Myrle W. Copeland, Laboratory Assistant.

LIME PRODUCTS REGISTERED FOR 1931

The Lime Products registered for 1931 sales included 185 brands, registered by 97 manufacturing and importing firms, for which 103 licenses were issued, and were as follows:

ALBA MARL LIME CO., CHARLESTOWN, W. VA.
Alba Marl

AMERICAN LIME & STONE CO., BELLEFONTE, PA.
Bald Eagle Hydrated Lime
AlSCO Pulverized Limestone
American Agricultural Lime
Agricultural Lime
Bell Mine High Calcium Hydrated Lime
Bell Mine Pebble Lime
Rotary Kiln Pulverized Lime
Alfalfa Pulverized Limestone

F. M. BAKER, HUEFNER, PA.
Burned Ground Lime

J. E. BAKER COMPANY, YORK, PA.
Snow Flake Ground Limestone
Victor Burned Lime
Victor Hydrated Lime
Susquehanna Hydrated Lime
Agri-Lime

BAKER STONE COMPANY, BLOOMSBURG, PA.
Baker Brand Ground Lime (Burned)
Baker Brand Hydrated Lime
Baker Brand Lump Lime

S. W. BARRICK & SONS, INC., WOODSBORO, MD.
Barrick's Agricultural Lump Lime
Barrick's Agricultural Ground Burnt Lime
Barrick's Hydrated Lime

BAUGH & SONS COMPANY, PHILADELPHIA, PA.
Baugh's Pure Ground Land Plaster
Oyster Shell Lime

BERKS CAST STONE CO., READING, PA.
Berk's Pulverized Lime

BLAIR LIMESTONE COMPANY, MARTINSBURG, W. VA.
Opequon Hydrated Lime
Shenandoah Ground Burned Lime

BONNYMEADE FARMS, HARRISBURG, PA.
Agricultural Lump Lime
Agricultural Lime Screenings

JOHN J. CANNON, WILLOW GROVE, PA.
Cannon's Ground Burned Lime

THE CARBON LIMESTONE CO., YOUNGSTOWN, OHIO
Carbon Agricultural Limestone No. 1
Carbon Agricultural Meal

THE PHILIP CAREY MANUFACTURING CO., PLYMOUTH MEETING, PA.
Ammaco Hydrated Lime

CASTANEA PAPER CO., JOHNSONBURG, PA.
Nypen Agricultural Precipitated Lime

CENTRAL CHEMICAL CO., INC., HAGERSTOWN, MD.
"GRO-ALL" Hydrated Lime
"GRO-ALL" Hy-Cal Lime

CHEMICAL LIME CO., INC., BELLEFONTE, PA.
"Clover" Brand Agricultural Lime
"Diamond" Brand Chemically Pure Hydrated Lime
Agricultural Lime
Agricultural Ground Limestone
"Kno-Kore" Spray Lime

CHESTER VALLEY LIME & PRODUCTS CO., WEST CHESTER, PA.
Chester Valley Brand Hydrated Lime

THE COLGAN LIMESTONE PRODUCTS CO., COLUMBUS, OHIO
Sweet Soil Pulverized Limestone
Sweet Soil Hydrated Lime

THE COLUMBIA PRODUCTS COMPANY, BARBERTON, OHIO
Plant Lime

CO-OPERATIVE G. L. F. EXCHANGE, INC., ROCHESTER, NEW YORK
G. L. F. Quality Hydrated Agricultural Lime

G. & W. H. CORSON, INC., PLYMOUTH MEETING, PA.
Corson's Mason Hydrate
Corson's Run of Kiln

DUNCANVILLE LIME & STONE CO., DUNCANVILLE, PA.
Burned Lime

DUQUESNE SLAG PRODUCTS CO., PITTSBURGH, PA.
Agricultural Slag SLS Brand

DYSON & RICE, LANDISBURG, PA.
Landisburg Lime

EDMISTON LIME CO., ACOSTA, PA.
Burned and Pulverized Agricultural Lime

EVERETT-SAXTON COMPANY, EVERETT, PA.
Ft. Bedford Hydrate Lime
Ft. Bedford Lump Lime
Ft. Bedford Pebble Lime
Ft. Bedford Ground Burned Lime
Ft. Bedford Lime Forkings
Ft. Bedford Pulverized Limestone
Ft. Bedford Hydrate Lime Group B

FALLING SPRING LIME CO., INC., COVINGTON, VA.
Falling Spring Precipitated Lime

FRANCE LIME PRODUCTS, INC., TOLEDO, OHIO
France Pulverized Agricultural Limestone
France Agricultural Hydrated Lime

THE GIBSONBURG LIME PRODUCTS CO., GIBSONBURG, OHIO
Gibsonburg Agricultural Lime (Hydrated)

GROVE CITY LIMESTONE CO., SHARON, PA.
Four Leaf Clover Brand Agricultural Lime

- M. J. GROVE LIME CO., LIME KILN, MD.
 Famous Frederick County Agricultural Lime
 Famous Frederick County Hydrated Lime
 Famous Frederick County Ground Lime
 Carbo Oxide
 Pulverized Limestone
- JOHN W. HEDEGOR, BOYERS, PA.
 Burned Lump Lime
 Hydrated Lime
- THE HERZOG LIME & STONE CO., FOREST, OHIO
 Capitol Agricultural Hydrated Lime
- HOWELLVILLE QUARRIES, INC., HOWELLVILLE, PA.
 Howellville Pulverized Limestone
- I. DANA KAHLE, KNOX, PA.
 Royal Blue Brand Pulverized Limestone
- LUTHER KELLER CO., SCRANTON, PA.
 Keller Lump Agricultural Lime
- THE KELLEY ISLAND LIME & TRANSPORT CO., CLEVELAND, OHIO
 Tiger Agricultural Hydrated Lime-MHD
 Marblehead Agricultural Pulverized Limestone-MHD
 Agri-spray High Calcium Hydrate-MHD
 Tiger Agricultural Hydrated Lime-White Rock
 Tiger Hydrated Lime-White Rock
- KEYSTONE GRANGE EXCHANGE, INC., HARRISBURG, PA.
 Granger's Agricultural Lime
- HENRY KILGUS, MUNCY, PA.
 Muncy Lump Lime
- THE KITTANNING LIMESTONE CO., KITTANNING, PA.
 Raw Pulverized Lime
 No. 2 Buckwheat
- E. E. KOUGH, NEWVILLE, PA.
 Spangler's Pulverized Lime
- W. C. KRABER, DOVER, PA.
 White Rose Hydrated Lime
- JACOB Z. LANDIS, LEAMAN PLACE, PA.
 Leaman Place Limestone
- LANDIS STONE MEAL CO., RHEEMS, PA.
 White Lilly Brand Pulverized Limestone
- THE LEGORE LIME COMPANY, LEGORE, MD.
 LeGore Lump Lime
 LeGore Ground Burnt Lime
 LeGore Hydrated Lime
 LeGore All-In-One Agricultural Lime
- LIMESTONE PRODUCTS CORPORATION OF AMERICA, NEWTON, N. J.
 Lime Crest Brand of Pulverized Limestone
- LIMETON LIME CO., INC., LIMETON, VA.
 Clover Brand Hydrated Lime
- W. E. McCONNELL, MUNCY, PA.
 Lump Lime
- THE MARBLE CLIFF QUARRIES CO., COLUMBUS, OHIO
 Marble Cliff General Purpose Lime

MERCER LIME & STONE CO., MERCER, PA.

Hydrated Lime
Burned Lime

MICHIGAN LIMESTONE & CHEMICAL CO., INC., BUFFALO, N. Y.

Calcite Brand Michigan Limestone
Superfine Calcite Brand Michigan Limestone

H. E. MILLARD, ANNVILLE, PA.

H. E. Millard's Air Floated Pulverized Limestone
Sweet Arrow Hydrated Lime
Over The Top Hydrated Lime

MOHAWK LIMESTONE PRODUCTS CO., MOHAWK, N. Y.

Mohawk Lime Hydrate
Mohawk Pulverized Limestone

NATIONAL GYPSUM CO., BUFFALO, N. Y.

Luckey Agricultural Hydrated Lime

NATIONAL LIMESTONE CO., NAGINEY, PA.

High Grade Hydrated Lime

THE NATIONAL LIME & STONE CO., FINDLAY, OHIO

Monarch Hydrated Agricultural Lime

NATIONAL MORTAR & SUPPLY CO., PITTSBURGH, PA.

Superior Agricultural Hydrate Lime
Banner Pulverized Agricultural Limestone

NATURAL LIME MARL CO., ROANOKE, VA.

Lime-Marl

NEW CASTLE LIME & STONE CO., NEW CASTLE, PA.

Pulverized Agricultural Limestone "New Castle" Brand

NEW ENTERPRISE STONE & LIME CO., NEW ENTERPRISE, PA.

Burned Lime
Ground Lime

NORTH AMERICAN CEMENT CORPORATION, HAGERSTOWN, MD.

Berkeley Hydrated Lime
Berkeley Hydra-Calcite
Berkeley Ground Lime

THE OHIO HYDRATE & SUPPLY CO., WOODVILLE, OHIO

Ohio Agricultural Hydrated Lime
OHSO Pulverized Raw Lime Limestone-Dolomite

THE OYSTER SHELL PRODUCTS CO., PHILADELPHIA, PA.

Ground Oyster Shell Lime

PATUXENT GUANO CO., BALTIMORE, MD.

Patuxent Crushed Oyster Shell Lime

PEERLESS LIME CO., HYNDMAN, PA.

No. 8 Blue Stone Lime (Burned)

THE PINE CREEK LIME & STONE CO., JERSEY SHORE, PA.

Imperial Hydrated Lime.

POTOMAC POULTRY FOOD CO., INC., BALTIMORE, MD.

Potoline Oyster Shell Lime

PURE CALCIUM PRODUCTS CO., PAINSVILLE, OHIO

Superior Farm and Garden Lime

READING POULTRY FOOD CO., READING, PA.

Reading Oyster Shell Lime

- C. WILBERT REEDER, MUNCY, PA.
Chippewa Lump Lime (Agricultural)
- ROBERT A. REICHARD, INC., ALLENTOWN, PA.
Lehigh Hydrated Lime
Lehigh Ground Burnt Lime
- ROSE POINT STONE & LIME CO., NEW CASTLE, PA.
Rose Point Burned Lump Lime
Rose Point Ground Burned Lime
Rose Point Hydrated Lime
Peerless Hydrated Lime
- SCIOTO LIME & STONE CO., DELAWARE, OHIO
Clover Grower Hydrated Lime
- THE SOLVAY PROCESS CO., SYRACUSE, N. Y.
Solvay Pulverized Limestone
- SPRINGHILL PULVERIZED LIMESTONE COMPANY, UNIONTOWN, PA.
Springhill Ground Limestone
- STANDARD CHEMICAL WORKS, INC., READING, PA.
Snowflake Hydrated Lime
- THE STANDARD LIME & STONE CO., BALTIMORE, MD.
Standard Pulverized Limestone
- THE STANDARD SLAG CO., YOUNGSTOWN, OHIO
Standard Agricultural Slag
Ground Slag—Air Cooled
- STEACY & WILTON CO., WRIGHTSVILLE, PA.
Sterling Brand Hydrated Lime
Pulverized Fresh Burned Lime
Run of Kiln Agricultural Lime
Pulverized Limestone
- SUPERIOR LIME CO., YORK, PA.
Superior Brand Lime
- JAMES TAGGART, NORTHUMBERLAND, PA.
One Come Seven Ground Limestone
- THOMASVILLE STONE & LIME CO., THOMASVILLE, PA.
Ground Limestone
- EDWARD TULE, MUNCY, PA.
Lime Bluff Lump Lime
- TYRONE LIME & STONE CO., TYRONE, PA.
Sweet Clover Pulverized Limestone
Agricultural Ground Limestone
- UNITED STATES GYPSUM CO., CHICAGO, ILLINOIS
USG Agricultural Hydrated Lime (Genoa)
USG Agricultural Hydrated Lime (Oakfield)
Ben Franklin Agricultural Gypsum
USG Agricultural Hydrate Lime (Farnams)
- UNIVERSAL GYPSUM & LIME CO., CHICAGO, ILLINOIS
Universal Spraying Hydrated Lime
Palmer Hydrated Lime
Challenge Brand Pulverized Limestone Flour
Chemical Lump Lime Spraying Lime
Challenge Brand Agricultural Lime
- VALLEY VIEW LIME CO., BELLEFONTE, PA.
Clover Leaf Hydrated Lime

VERMARCO LIME CO., WEST RUTLAND, VT.
Vermarco Agricultural Lime

WARNER COMPANY, PHILADELPHIA, PA.
Warner's Limoid (Hydrated Lime)
Warner's Limoid Inoculated
Merion Hydrated Lime
Knickerbocker Hydrated Lime
Warner's Pulverized Burned Lime
Warner's Pulverized Limestone
Warner's Run-of-Kiln Lime
Warner's Limoid (Hydrated Lime 10 lb. package)

THE WASHINGTON BUILDING LIME CO., BALTIMORE, MD.
Standard Hydrated Lime
Washington Pulverized Limestone

WEST BRANCH LIME CO., WILLIAMSPORT, PA.
Clover Leaf Quick Lime Ground
Clover Leaf Quick Lime Lump
Clover Leaf Hydrated Lime

WHITEROCK QUARRIES INC., BELLEFONTE, PA.
Run-of-Kiln Lump Lime
Forkings
Nittany H-O Hydrated Lime
Whiterock Pulverized Limestone
Whiterock Super-Fine Pulverized Limestone

WICKWIRE SPENCER STEEL CORPORATION, BUFFALO, N. Y.
Wickwire Pulverized Limestone

THE WOODVILLE LIME PRODUCTS CO., TOLEDO, OHIO
Klover Krop Agricultural Lime
Tenlime Household Hydrated Lime
Koral Semi-Calced Agricultural Lime

WORLOCK STONE CO., INC., CANASTOTA, N. Y.
Diamond "A" Agricultural Lime

YORK CHEMICAL WORKS, YORK, PA.
Dempwolf's Pure Ground Land Plaster

WILLIAM ZINGER HANDY PATCHING PLASTER CO., PHILADELPHIA, PA.
Zinger's Handy Prepared Lime

TABLE I—AVERAGE ANALYSES AND RETAIL PRICES

Classes of Lime Products	Number of samples	Calcium Oxide	Magnesium Oxide	Insoluble Matter	Price per ton
		%	%	%	\$
Pulverized Limestone -----	65	49.91	2.90	5.15	6.57
Pulverized Oyster Shell -----	3	47.08	0.55	9.48	9.05
Artificial Carbonate of Lime -----	16	45.56	6.65	2.60	9.73
Lime -----	8	62.57	12.99	5.49	7.16
Hydrated Lime (Low Magnesia) -----	102	68.60	2.20	1.84	11.82
Hydrated Lime (High Magnesia) -----	23	48.51	31.50	0.69	11.12

EXPLANATION OF TABLES OF ANALYSES

The Tables which follow, showing the results in detail of the chemical analyses of the official samples received during the two year period covered by the report, are arranged according to classes, Table II including Pulverized Limestone and Oyster Shell and Artificial Carbonate of Lime; Table III, Lime and Hydrated Lime. The information included in each table shows the Chemist's numbers, classes and brand names, the names and addresses of Manufacturers, Importers and Selling Agents, the percentages of calcium oxide and magnesium oxide found upon analyses, together with guarantees for these constituents and their equivalent estimated carbonate values with guarantees for these values in the case of Carbonates of Lime, and also the amounts of acid insoluble matter and retail selling values. Those samples which were found to be deficient in calcium and magnesium oxides to the extent of .50 per cent or more are indicated by an asterisk (*).

In estimating the composition of the several classes of Lime Products, it is necessary to employ certain factors, which are derived from the chemical formulas representing them. As previously shown determinations are made for calcium oxide, magnesium oxide, carbon dioxide and sulphur trioxide. Carbonate of Lime is represented by the formula CaCO_3 , Carbonate of Magnesia by MgCO_3 , Gypsum or Calcium Sulphate by CaSO_4 , Hydrated Lime by $\text{Ca}(\text{OH})_2$, and Magnesium Hydrate by $\text{Mg}(\text{OH})_2$. To estimate the amounts of these forms or combinations the percentages of Calcium Oxide and Magnesium Oxide secured are multiplied by their respective factors. In order that these factors may be at hand for reference, they are included herewith as follows:—

EXPLANATION OF TABLES OF ANALYSES

Given	Required	Factor
Calcium oxide,	Calcium hydrate,	1.321
Calcium oxide,	Calcium carbonate,	1.7839
Calcium oxide,	Calcium sulphate,	2.4265
Calcium hydrate,	Calcium oxide,7570
Calcium carbonate,	Calcium oxide,5606
Calcium sulphate,	Calcium oxide,4121
Magnesium oxide,	Magnesium hydrate,	1.4468
Magnesium oxide,	Magnesium carbonate,	2.0913
Magnesium hydrate,	Magnesium oxide,6912
Magnesium carbonate,	Magnesium oxide,4782
Calcium oxide,	Sulphur trioxide,	1.4265
Carbon dioxide,	Calcium carbonate,	2.2757
Carbon dioxide,	Magnesium carbonate,	1.9159
Calcium carbonate,	Carbon dioxide,4394
Sulphur trioxide,	Calcium sulphate, (Gypsum),	2.1504

TABLE II—PULVERIZED LIMESTONE, PULVERIZED O

Chemist's number	Name of Manufacturer and Brand	Sample Taken From—
PULVERIZED LIMESTONE		
AMERICAN LIME & STONE CO., BELLEFONTE, PA.		
C-2107	Alfalfa Pulverized Limestone, -----	Cannonsburg Milling Co., Cannonsburg,
C-1921	Also Pulverized Limestone, -----	Farmers & Consumers Commercial Union, Troy, -----
C-1918	Also Pulverized Limestone, -----	Gates Hardware Co., Grampion, -----
C-1911	Also Pulverized Limestone, -----	Gay, Murray Co., Tunkhannock, -----
C-2006	Also Pulverized Limestone, -----	Gay, Murray Co., Tunkhannock, -----
C-2029	Also Pulverized Limestone, -----	Thomas R. Martin, Apollo, -----
C-1939	Also Pulverized Limestone, -----	Reed Estate, Philipsburg, -----
C-1972	Also Pulverized Limestone, -----	Reed Estate, Philipsburg, -----
C-1957	Also Pulverized Limestone, -----	Somerset County Fertilizer Works, Inc., Somerset, -----
C-2048	Also Pulverized Limestone, -----	Tozier Hardware Co., LaJose, -----
C-1958	Pulverized Limestone for Agricultural Use, -----	Vinecent Huber, Patton, -----
THE CARBON LIMESTONE CO., YOUNGSTOWN, OHIO.		
C-1987	Carbon Agricultural Limestone, -----	E. J. Wahl, Rochester, -----
CHEMICAL LIME CO., BELLEFONTE, PA.		
C-1907	Agricultural Ground Limestone, -----	Luzerne County Cooperative Assocaiation, Inc., Wilkes-Barre, -----
C-2000	Agricultural Ground Limestone, -----	Luzerne County Cooperative Association, Inc., Wilkes-Barre, -----
EVERETT-SAXTON COMPANY, EVERETT, PA.		
C-1945	Fort Bedford Pulverized Limestone, -----	J. D. London, Cloe, -----
C-1994	Fort Bedford Pulverized Limestone, -----	St. Clair, Rinn & Co., Indiana, -----
C-1963	Fort Bedford Pulverized Limestone, -----	Star Milling Company, Clymer, -----
FRANCE LIME PRODUCTS, INC., TOLEDO, OHIO.		
C-1989	France Pulverized Agricultural Limestone	Greenville Coal & Ice Co., Greenville, --
C-1969	France Pulverized Agricultural Limestone,	J. H. Laird, Wylandville, -----
GROVE CITY LIMESTONE CO., SHARON, PA.		
C-2073	Four Leaf Clover Brand Agricultural Limestone, -----	P. J. Oesterling & Sons, Inc., Butler, --
LIMESTONE PRODUCTS CORPORATION OF AMERICA, NEWTON, N. J.		
C-2102	Lime Crest Brand of Pulverized Lime- stone, -----	J. B. Anderson's Son, Shickshinny, ----
C-2104	Lime Crest Brand of Pulverized Lime- stone, -----	Wayne B. Callender, Sweet Valley, ----
C-2103	Lime Crest Brand of Pulverized Lime- stone, -----	Devens Milling Co., Dallas, -----
C-2007	Lime Crest Brand of Pulverized Lime- stone, -----	Gay, Murray Company, Tunkhannock, -
C-2105	Lime Crest Brand of Pulverized Lime- stone, -----	Porter Michael, Wyoming, -----
C-1923	Lime Crest Brand of Pulverized Lime- stone, -----	Seligman & Co., Inc., Tamaqua, -----
C-1913	Lime Crest Brand of Pulverized Lime- stone, -----	Burton Williams, North Mehoopany, -----

YSTER SHELL AND ARTIFICIAL CARBONATE OF LIME

Calcium Oxide		Calcium Carbonate		Magnesium Oxide		Magnesium Carbonate		Insoluble Matter	Fineness					Selling price per ton at place of selection	Chemist's number
Found	Guaranteed	Found	Guaranteed	Found	Guaranteed	Found	Guaranteed		Coarsest Particles Pass Sieve Mesh No.		Amount of Sample Passing Sieve Meshes				
									Found	Guaranteed	10 Mesh	50 Mesh	100 Mesh		
%	%	%	%	%	%	%	%	%	No.	No.	%	%	%	\$	
54.37	53.79	96.99	96.00	0.51	0.48	1.01	1.00	3.06	30	20	100.0	96.8	89.2	4.05	C-2107
54.54	53.79	97.29	96.00	0.77	0.48	1.61	1.00	1.60	30	30	100.0	94.0	83.2	6.25	C-1921
53.87	53.79	96.10	96.00	0.84	0.48	1.76	1.00	2.22	30	30	100.0	91.2	79.6	6.85	C-1918
54.26	53.79	96.79	96.00	0.77	0.48	1.61	1.00	2.14	20	30	100.0	96.0	89.2	7.50	C-1911
54.45	53.79	97.13	96.00	0.72	0.48	1.51	1.00	2.70	50	30	100.0	100.0	94.0	7.00	C-2006
54.62	53.79	97.44	96.00	0.72	0.48	1.51	1.00	1.94	50	30	100.0	100.0	96.0	6.50	C-2029
54.38	53.79	97.01	96.00	0.83	0.48	1.74	1.00	1.60	50	30	100.0	100.0	99.2	8.00	C-1939
54.38	53.79	97.01	96.00	0.72	0.48	1.51	1.00	2.16	50	30	100.0	100.0	99.1	8.00	C-1977
54.88	53.79	97.90	96.00	0.83	0.48	1.74	1.00	1.34	50	30	100.0	100.0	96.0	5.60	C-1957
54.75	53.79	97.67	96.00	0.85	0.48	1.78	1.00	1.44	50	30	100.0	100.0	96.0	5.25	C-2048
54.43	-----	97.10	-----	0.78	-----	1.63	-----	1.44	10	-----	100.0	14.6	7.0	5.20	C-1958
51.59	51.29	92.03	91.55	0.68	0.47	1.42	0.98	5.66	20	20	100.0	83.6	66.4	-----	C-1987
52.92	52.52	94.40	94.12	1.11	1.54	2.32	3.00	3.32	20	20	100.0	91.6	72.0	9.40	C-1907
52.09	52.52	93.99	94.12	1.54	1.54	3.22	3.00	3.86	20	40	100.0	70.0	46.8	8.25	C-2000
50.29	-----	89.71	-----	2.28	-----	4.77	-----	5.22	30	20	100.0	86.4	66.4	6.50	C-1945
49.91	-----	89.03	-----	2.17	-----	4.54	-----	6.78	20	20	100.0	83.2	65.6	-----	C-1994
50.59	-----	90.25	-----	1.80	-----	3.76	-----	5.90	20	20	100.0	83.2	60.0	-----	C-1943
31.31	30.52	55.85	-----	22.21	21.04	46.45	-----	0.86	20	10	100.0	96.4	77.2	6.00	C-1989
30.92	30.52	55.16	-----	21.49	21.04	44.94	-----	1.00	10	10	100.0	74.8	62.8	6.50	C-1969
*53.07	53.75	94.67	94.89	0.64	0.30	1.34	1.50	3.66	20	20	100.0	64.8	45.2	-----	C-2073
*45.73	50.00	81.58	90.00	6.09	1.50	12.74	2.00	7.36	20	50	100.0	96.0	88.0	6.75	C-2102
*39.58	50.00	70.61	90.00	4.18	1.50	8.74	2.00	21.56	30	50	100.0	98.4	90.0	7.90	C-2104
*40.88	50.00	72.93	90.00	6.24	1.50	13.05	2.00	14.68	20	50	100.0	96.8	86.4	6.00	C-2103
*36.35	50.00	64.84	90.00	5.11	1.50	10.69	3.00	24.68	40	50	100.0	98.8	88.0	7.00	C-2007
*38.34	50.00	68.36	90.00	4.36	1.50	9.12	2.00	23.28	20	50	100.0	96.0	83.6	7.00	C-2105
*44.52	50.00	79.52	90.00	6.01	1.50	12.57	3.00	6.54	30	50	100.0	98.4	92.0	8.00	C-1923
*45.47	50.00	81.11	90.00	6.37	1.50	13.32	3.00	5.46	30	50	100.0	97.8	93.6	7.00	C-1913

*Deficient.

TABLE II—PULVERIZED LIMESTONE, PULVERIZED OYST

Chemist's number	Name of Manufacturer and Brand				Sample Taken From—
MICHIGAN LIMESTONE & CHEMICAL COMPANY, BUFFALO, N. Y.					
C-2021	Calcite	Brand	Michigan	Limestone, -----	J. F. Bedford, Tunkhannock, -----
C-1895	Calcite	Brand	Michigan	Limestone, -----	Cooperative Grange Milling Co., Titusville, -----
C-1965	Calcite	Brand	Michigan	Limestone, -----	Farmers Exchange, Indiana, -----
C-2008	Calcite	Brand	Michigan	Limestone, -----	Franklin Feed & Supply Co., Franklin, -----
C-1917	Calcite	Brand	Michigan	Limestone, -----	John H. Hayes, Luthersburg, -----
C-2047	Calcite	Brand	Michigan	Limestone, -----	John R. London, Troutville, -----
C-1883	Calcite	Brand	Michigan	Limestone, -----	Luzerne County Cooperative Association, Wilkes-Barre, -----
C-1943	Calcite	Brand	Michigan	Limestone, -----	J. M. Roth, Prospect, -----
C-2624	Calcite	Brand	Michigan	Limestone, -----	J. W. Shedler, Marianna, -----
C-2697	Calcite	Brand	Michigan	Limestone, -----	J. H. Sheffer Hardware, Knox, -----
C-2110	Calcite	Brand	Michigan	Limestone, -----	Geo. B. Sprowls, Claysville, -----
C-2033	H. E. MILLARD, ANNVILLE, PA. Air Floated Pulverized Limestone, -----				W. H. Dreibelbis, Shoemakersville, -----
C-2059	MOHAWK LIMESTONE PRODUCTS CO., MOHAWK, N. Y. Mohawk Pulverized Limestone, -----				S. E. Rumpf, New Milford, -----
C-1944	NEW CASTLE LIME & STONE CO., NEW CASTLE, PA. New Castle Brand Pulverized Agricultural Limestone, -----				Graham Brothers, Darlington, -----
C-1990	New Castle Brand Pulverized Agricultural Limestone, -----				Greenville Coal & Ice Co., Greenville, -----
C-1959	New Castle Brand Pulverized Agricultural Limestone, -----				Edgar Lockhart, Rochester Mills, -----
C-2072	New Castle Brand Pulverized Agricultural Limestone, -----				P. J. Oesterling & Sons, Inc., Butler, -----
C-1894	THE OHIO HYDRATE & SUPPLY CO., WOODVILLE, OHIO. OHSO Pulverized Raw Lime, -----				Cooperative Grange Milling Co., Titusville, -----
C-2019	OHSO Pulverized Raw Lime, -----				Lottsville Milling & Supply Co., Bear Lake, -----
C-1930	PURE CALCIUM PRODUCTS CO., PITTSBURGH, PA. Superior Farm and Garden Lime, -----				J. K. Lawson, Washington, -----
C-2058	THE SOLVAY PROCESS CO., SYRACUSE, N. Y. Solvay Pulverized Limestone, -----				Tom Brown, Montrose, -----
C-1914	Solvay Pulverized Limestone, -----				Farmers Cooperative Mercantile Co., Skidders Eddy, -----
C-1956	TYRONE LIME & STONE CO., TYRONE, PA. Agricultural Ground Limestone, -----				Edgar Gooderham, Patton, -----
C-2067	Agricultural Ground Limestone, -----				Edgar Gooderham, Patton, -----
C-2101	Sweet Clover Pulverized Limestone, -----				Luzerne County Cooperative Association, Inc., Wilkes-Barre, -----

ER SHELL AND ARTIFICIAL CARBONATE OF LIME—Cont'd

Calcium Oxide		Calcium Carbonate		Magnesium Oxide		Magnesium Carbonate		Insoluble Matter	Fineness					Selling price per ton at place of selection	Chemist's number
Found	Guaranteed	Found	Guaranteed	Found	Guaranteed	Found	Guaranteed		Coarsest Particles Pass Sieve Mesh No.		Amount of Sample Passing Sieve Meshes				
									Found	Guaranteed	10 Mesh	50 Mesh	100 Mesh		
54.17	54.50	96.63	97.00	1.15	1.00	2.40	2.00	1.84	20	10	100.0	75.2	58.4	6.00	C-2021
*53.87	54.50	96.10	97.00	1.25	1.00	2.61	2.00	1.42	20	10	100.0	79.2	64.8	7.50	C-1895
54.43	54.50	97.10	97.00	1.32	1.00	2.76	2.00	0.92	20	10	100.0	51.8	40.8	8.00	C-1965
*54.00	54.50	96.33	97.00	1.22	1.00	2.55	2.00	1.56	20	10	100.0	74.8	58.4	5.75	C-2008
*53.54	54.50	95.51	97.00	1.19	1.00	2.49	2.00	1.98	20	10	100.0	77.6	63.2	6.60	C-1917
54.51	54.50	97.24	97.00	1.16	1.00	2.43	20.0	1.04	20	10	100.0	74.0	57.2	5.70	C-2047
*53.37	54.50	95.21	97.00	1.27	1.00	2.60	2.00	1.70	20	10	100.0	80.8	68.0	7.40	C-1883
*53.59	54.50	95.60	97.00	1.31	1.00	2.74	2.00	2.14	20	10	100.0	75.2	60.8	6.50	C-1943
54.23	54.50	96.74	97.00	1.16	1.00	2.43	2.00	1.48	20	10	100.0	76.8	63.2	7.25	C-2024
54.31	54.50	96.88	97.00	1.38	1.00	2.90	2.00	2.00	20	10	100.0	76.4	54.8	6.50	C-2097
54.77	54.50	97.70	97.00	1.07	1.00	2.21	2.00	1.60	20	10	100.0	71.2	93.2	5.25	C-2110
54.40	53.00	97.04	96.00	0.43	0.48	0.90	1.00	2.00	100	100	100.0	100.0	100.0	8.00	C-2033
*49.37	50.00	88.07	90.00	1.90	1.60	3.97	3.00	7.58	30	80	100.0	97.6	87.6	6.00	C-2059
50.06	46.75	89.30	-----	0.87	0.70	1.82	-----	7.50	20	10	100.0	82.4	70.8	6.50	C-1944
50.92	46.75	90.84	-----	0.81	0.70	1.69	-----	6.72	20	10	100.0	84.8	71.6	6.00	C-1990
51.18	46.75	91.30	-----	0.58	0.70	1.21	-----	6.16	20	10	100.0	83.6	71.2	5.50	C-1959
51.28	46.75	91.48	-----	0.53	0.70	1.11	-----	5.90	20	10	100.0	83.6	69.6	5.25	C-2072
31.19	31.50	55.64	56.70	21.88	20.00	45.70	42.30	0.54	50	-----	100.0	100.0	92.8	7.50	C-1894
31.66	31.50	56.48	56.70	21.47	20.00	44.96	42.30	0.32	100	-----	100.0	100.0	100.0	6.00	C-2019
*54.26	55.00	96.79	98.20	0.52	0.15	1.09	0.30	0.16	100	100	100.0	100.0	100.0	7.90	C-1930
49.20	46.50 to 53.20	87.77	83.00 to 95.00	2.41	1.50 to 2.90	5.04	3.14 to 6.10	6.76	20	20	100.0	74.0	58.6	-----	C-2058
48.94	46.50 to 53.20	87.30	83.00 to 95.00	2.65	1.50 to 2.90	5.57	3.14 to 6.10	6.12	20	20	100.0	81.3	66.8	6.00	C-1914
*46.37	48.68	82.72	86.84	*1.22	1.87	2.55	3.91	13.18	10	20	100.0	64.8	48.0	5.80	C-1956
*48.10	48.68	85.81	86.84	1.57	1.87	3.28	3.91	11.04	10	20	100.0	64.0	43.6	5.80	C-2067
*50.81	52.91	90.64	94.50	1.75	0.60	3.66	1.26	7.82	50	40	100.0	100.0	98.0	7.25	C-2101

*Deficient.

TABLE II—PULVERIZED LIMESTONE, PULVERIZED OYST

Chemist's number	Name of Manufacturer and Brand	Sample Taken From—
WHITEROCK QUARRIES, INC., BELLEFONTE, PA.		
C-1971	Whiterock Pulverized Limestone, -----	C. L. Ayers, Cannonsburg, -----
C-1953	Whiterock Pulverized Limestone, -----	W. M. Burleson, Port Allegheny, -----
C-1997	Whiterock Pulverized Limestone, -----	W. H. Butterbaugh, Hillsdale, -----
C-1977	Whiterock Pulverized Limestone, -----	Marvin Cope, Berwick, -----
C-1979	Whiterock Pulverized Limestone, -----	Kline Flour Mills Co., Brookville, -----
C-2013	Whiterock Pulverized Limestone, -----	Kline Flour Mills Co., Brookville, -----
C-2096	Whiterock Pulverized Limestone, -----	Kline Flour Mills Co., Brookville, -----
C-1966	Whiterock Pulverized Limestone, -----	Kline Grain Company, Sheloeta, -----
C-2022	Whiterock Pulverized Limestone, -----	W. W. Lane, Tunkhannock, -----
C-1897	Whiterock Pulverized Limestone, -----	Union City Cooperative Association, Union City, -----
WORLOCK STONE COMPANY, INC., CANASTOTA, N. Y.		
C-2023	Diamond "A" Agricultural Lime, -----	Harry Carter, Meshoppen, -----
C-1915	Diamond "A" Agricultural Lime, -----	Farmers Cooperative Mercantile Co., Skinners Eddy, -----
C-1925	Diamond "A" Agricultural Lime, -----	E. H. Johnston, Ulster, ----- Average, -----
* PULVERIZED OYSTER SHELL		
THE BAUGH & SONS CO., BALTIMORE, MD.		
C-1919	Oyster Shell Lime, -----	Routh & Swartzle, Clearfield, -----
THE POTOMAC POULTRY FOOD CO., BALTIMORE, MD.		
C-1884	Potoline Oyster Shell Lime, -----	Carlisle Fertilizer Works, Carlisle, -----
READING POULTRY FOOD CO., READING, PA.		
C-2034	Reading Oyster Shell Lime, -----	W. H. Dreibelbis, Shoemakersville, ----- Average, -----
ARTIFICIAL CARBONATE OF LIME		
COLUMBIA PRODUCTS CO., BARBERTON, OHIO		
C-1916	Plant Lime, -----	Anderson Hardware Co., New Bethlehem
C-1893	Plant Lime, -----	Cooperative Grange Milling Co., Titusville
C-1963	Plant Lime, -----	Dayton Milling Co., Dayton, -----
C-2027	Plant Lime, -----	W. H. Dunlap, Jr., Cannonsburg, -----
C-2009	Plant Lime, -----	Franklin Feed & Supply Co., Franklin, -----
C-2098	Plant Lime, -----	H. B. George, Sligo, -----
C-1961	Plant Lime, -----	Greenville Coal & Ice Co., Greenville, -----
C-2016	Plant Lime, -----	Johnston Byer Hardware Co., Rural Valley, -----
C-1898	Plant Lime, -----	King Brothers, Uniontown, -----
C-2028	Plant Lime, -----	Kiser Hardware, Shippensburg, -----
C-1988	Plant Lime, -----	Klinger Mills, Inc., Butler, -----
C-2074	Plant Lime, -----	Klinger Mills, Inc., Butler, -----
C-1970	Plant Lime, -----	J. H. Laird, Wylandville, -----
C-2081	Plant Lime, -----	Latrobe Cash Feed Store, Latrobe, -----
C-1983	Plant Lime, -----	J. H. Sheffer Hardware, Knox, -----
C-2106	Plant Lime, -----	E. F. Spahr, Roseoe, ----- Average, -----

ER SHELL AND ARTIFICIAL CARBONATE OF LIME—Cont'd

Calcium Oxide		Calcium Carbonate		Magnesium Oxide		Magnesium Carbonate		Insoluble Matter	Fineness					Selling price per ton at place of selection	Chemist's number
Found	Guaranteed	Found	Guaranteed	Found	Guaranteed	Found	Guaranteed		Coarsest Particles Pass Sieve Mesh No.		Amount of Sample Passing Sieve Meshes				
									Found	Guaranteed	10 Mesh	50 Mesh	100 Mesh		
51.65	51.00	92.14	95.00	0.98	0.50	2.05	1.00	5.56	50	40	100.0	100.0	95.2	7.50	C-1971
51.97	51.00	92.71	95.00	1.00	0.50	2.09	1.00	5.16	30	40	100.0	94.0	81.2	6.00	C-1953
52.58	51.00	93.80	96.00	0.98	0.50	2.05	1.00	4.16	40	20	100.0	95.2	77.2	-----	C-1997
52.08	51.00	92.82	96.00	0.98	0.50	2.05	1.00	4.04	20	30	100.0	72.8	50.0	5.00	C-1977
*50.48	51.00	90.05	96.00	1.16	0.50	2.43	1.00	7.18	30	30	100.0	91.6	76.4	6.50	C-1979
53.37	51.00	95.21	96.00	0.77	1.00	1.61	2.00	3.74	50	30	100.0	100.0	97.2	6.50	C-2013
53.07	51.00	94.67	96.00	0.94	0.50	1.98	1.00	5.80	20	20	100.0	81.2	57.2	6.00	C-2006
53.77	51.00	95.92	95.00	0.74	0.50	1.55	1.00	3.24	20	40	100.0	68.4	48.8	6.00	C-1966
52.58	51.00	93.80	96.00	0.92	0.50	1.92	1.00	4.16	40	20	100.0	92.4	78.4	5.50	C-1922
52.14	51.00	93.01	95.00	0.63	0.50	1.32	1.00	4.32	20	40	100.0	90.0	70.0	6.40	C-1897
48.43	46.30	86.39	82.63	*2.19	3.35	4.58	7.00	8.74	20	20	100.0	82.0	62.4	6.00	C-2023
48.27	46.30	86.11	82.63	*2.25	3.35	4.71	7.00	8.50	20	20	100.0	82.8	67.6	7.00	C-1915
48.38	46.30	86.31	82.63	*2.43	3.35	5.08	7.00	8.48	20	20	100.0	79.2	58.0	6.75	C-1925
49.91	-----	89.03	-----	2.90	-----	6.06	-----	5.15	30	-----	100.0	85.7	73.7	6.57	-----
*42.90	47.00	76.53	83.75	0.70	0.50	1.46	1.00	16.66	20	14	100.0	60.4	44.0	10.60	C-1919
48.16	42.00	85.91	75.00	0.55	0.50	1.15	1.00	8.04	20	14	100.0	65.6	50.4	-----	C-1884
50.19	46.88	89.53	83.63	0.41	0.54	0.86	1.13	3.74	10	10	100.0	52.8	28.8	7.50	C-2034
47.08	-----	83.99	-----	0.55	-----	1.15	-----	9.48	17	-----	100.0	59.6	41.1	9.05	-----
*43.74	47.65	78.03	85.11	6.70	4.00	14.01	8.34	2.98	20	20	100.0	96.8	90.8	12.00	C-1916
*42.90	47.65	76.53	85.11	6.30	4.00	13.18	8.34	3.64	20	20	100.0	96.0	90.8	10.00	C-1893
47.19	38.50	84.18	69.00	*4.99	9.50	10.44	19.75	1.20	30	20	100.0	98.0	94.0	-----	C-1968
45.87	44.80	81.83	80.00	*3.94	6.00	8.24	12.60	1.74	40	20	100.0	98.4	93.2	8.50	C-2027
47.75	44.80	85.18	80.00	*4.58	6.00	9.60	12.60	1.78	20	20	100.0	97.6	92.0	7.75	C-2009
*39.86	44.80	71.11	80.00	7.26	6.00	15.18	12.60	4.12	30	20	100.0	96.8	91.6	12.00	C-2008
46.37	38.50	82.72	69.00	*5.80	9.50	12.13	19.75	2.60	30	20	100.0	98.0	94.4	9.00	C-1961
48.26	38.50	86.09	69.00	*4.89	9.50	10.23	19.75	2.38	20	20	100.0	96.8	91.2	10.00	C-2016
*44.41	47.65	79.22	85.11	6.77	4.00	14.10	8.34	3.38	20	20	100.0	96.4	90.8	8.20	C-1898
42.30	38.50	75.46	69.00	9.31	9.50	19.51	19.75	2.46	20	20	100.0	98.0	94.0	12.00	C-2028
49.25	38.50	87.86	69.00	*4.24	9.50	8.87	19.75	1.80	30	20	100.0	98.8	95.6	9.50	C-1988
46.13	44.80	82.29	80.00	6.11	6.00	12.80	12.60	2.58	30	20	100.0	96.4	91.6	9.75	C-2074
49.59	38.50	88.46	69.00	*4.06	9.50	8.37	19.75	1.56	30	20	100.0	98.4	96.0	9.00	C-1970
*42.35	44.80	75.55	80.00	9.62	6.00	20.12	12.60	3.54	20	20	100.0	95.2	87.6	9.50	C-2087
50.14	38.50	89.44	69.00	*3.67	9.50	7.55	19.75	1.68	40	20	100.0	99.1	96.8	12.00	C-1983
*42.85	44.80	76.44	80.00	8.67	6.00	18.09	12.60	4.18	20	20	100.0	95.0	88.0	6.75	C-2106
45.56	-----	81.27	-----	6.05	-----	12.65	-----	2.60	26	-----	100.0	97.3	92.4	9.73	-----

*Deficient.

TABLE III—LIME AND

Chemist's number	Name of Manufacturer and Brand	Sample Taken From—
LIME		
BLAIR LIMESTONE COMPANY, PITTSBURGH, PA.		
C-1967	Shenandoah Ground Burned Lime, -----	Max R. Coleman, Indiana, -----
C-2044	Shenandoah Ground Burned Lime, -----	Max R. Coleman, Indiana, -----
C-2003	Shenandoah Ground Burned Lime, -----	W. N. Lane, Tunkhannock, -----
DUNCANSVILLE LIME & STONE CO., DUNCANSVILLE, PA.		
C-2065	Burned Lime, -----	Duncansville Lime & Stone Co., Duncansville, -----
WM. EDMISTON, ACOSTA, PA.		
C-2090	Burned and Pulverized Agricultural Lime	Wm. Edmiston, Acosta, -----
NEW ENTERPRISE STONE & LIME CO., ROARING SPRINGS, PA.		
C-2066	Agricultural Lump Lime, -----	New Enterprise Stone & Lime Co., Roaring Springs, -----
PEERLESS LIME COMPANY, HYNDMAN, PA.		
C-2077	Burnt Lime, -----	Burkett Brothers, Hyndman, -----
ROSE POINT STONE & LIME CO., NEW CASTLE, PA.		
C-1946	Rose Point Ground Burned Lime, -----	E. L. Ransom, Fisher, -----
HYDRATED LIME (Low Magnesia)		
AMERICAN LIME & STONE CO., BELLEFONTE, PA.		
C-1900	American Agricultural Lime, -----	Cannonsburg Milling Co., Cannonsburg, -----
C-2010	American Agricultural Lime, -----	Union City Cooperative Association, Union City, -----
C-1899	Bald Eagle Hydrated Lime, -----	Cannonsburg Milling Co., Cannonsburg, -----
C-1938	Bald Eagle Hydrated Lime, -----	Coburn Grain & Creamery Co., Coburn, -----
C-2055	Bald Eagle Hydrated Lime, -----	Coburn Grain & Creamery Co., Coburn, -----
C-2057	Bald Eagle Hydrated Lime, -----	John M. Crossen, Montrose, -----
C-1920	Bald Eagle Hydrated Lime, -----	Farmers & Consumers Commercial Union, Troy, -----
C-1964	Bald Eagle Hydrated Lime, -----	Farmers Exchange, Indiana, -----
C-1995	Bald Eagle Hydrated Lime, -----	Farmers Exchange, Indiana, -----
C-1889	Bald Eagle Hydrated Lime, -----	Fetzer Brothers, Brookville, -----
C-2095	Bald Eagle Hydrated Lime, -----	Grain & Elevator Co., Coburn, -----
C-1881	Bald Eagle Hydrated Lime, -----	Wm. Krause, Dallas, -----
C-2017	Bald Eagle Hydrated Lime, -----	Linesville Coal, Lime & Cement Co., Linesville, -----
C-2086	Bald Eagle Hydrated Lime, -----	R. R. Martin, Saltsburg, -----
C-2049	Bald Eagle Hydrated Lime, -----	T. H. Mons, Kylertown, -----
C-1955	Bald Eagle Hydrated Lime, -----	Orr & Grazier, Tyrone, -----
C-1973	Bald Eagle Hydrated Lime, -----	J. O. Reed Estate, Philipsburg, -----
C-1903	Bald Eagle Hydrated Lime, -----	Selinsgrove Coal & Farmers Supply Co., Selinsgrove, -----
C-1932	Bald Eagle Hydrated Lime, -----	Tingley & Page, New Milford, -----
THE BAKER STONE COMPANY, BLOOMSBURG, PA.		
C 2002	Baker Brand Hydrated Lime, -----	McMichael & Vosler, Hunlocks, Creek, -----
J. E. BAKER COMPANY, YORK, PA.		
C-1975	Susquehanna Hydrated Lime, -----	Gibbs Milling Co., Nantioke, -----
C-2099	Susquehanna Hydrated Lime, -----	Gibbs Milling Co., Nantioke, -----
C-1948	Susquehanna Hydrated Lime, -----	B. F. Rhoads, Quarryville, -----

HYDRATED LIME

Calcium Oxide		Magnesium Oxide		Carbon Dioxide	Insoluble Matter	Selling price per ton at place of selection	Chemist's number
Found	Guaranteed	Found	Guaranteed				
%	%	%	%	%	%	\$	
*44.54	48.00	*30.15	32.00	7.71	5.38	9.50	C-1967
*45.26	48.00	*29.41	32.00	8.34	5.42	9.50	C-2044
*43.93	48.00	*29.22	32.00	8.31	5.32	10.00	C-2003
87.69	-----	0.94	-----	2.35	1.60	5.00	C-2065
47.14	-----	5.16	-----	13.50	14.94	5.00	C-2090
82.50	-----	6.38	-----	0.95	1.42	4.00	C-2066
*†80.03	-----	1.58	-----	1.37	2.06	4.25	C-2077
*69.50	75.00	1.09	1.00	5.15	7.74	10.00	C-1946
62.57	-----	12.99	-----	5.96	5.49	7.16	-----
66.36	64.00	1.03	1.00	-----	1.82	7.00	C-1900
72.68	64.00	1.01	1.00	-----	1.84	9.25	C-2010
72.02	69.00	0.89	1.00	-----	0.56	8.75	C-1899
71.85	69.00	0.85	1.00	-----	0.24	11.00	C-1938
72.23	69.00	0.81	1.00	-----	0.72	-----	C-2055
72.06	69.00	0.81	1.00	-----	0.46	13.00	C-2057
70.84	69.00	0.83	1.00	-----	0.60	12.00	C-1920
72.26	69.00	0.91	1.00	-----	0.48	12.25	C-1964
71.77	69.00	1.00	1.00	-----	0.56	11.75	C-1995
72.35	69.00	0.87	1.00	-----	0.30	14.00	C-1889
71.87	69.00	0.90	1.00	-----	1.56	10.00	C-2095
71.79	69.00	0.88	1.00	-----	0.46	13.50	C-1881
*68.01	69.00	1.03	1.00	-----	0.48	**	C-2017
71.82	69.00	0.91	1.00	-----	0.96	9.00	C-2083
72.93	69.00	0.83	1.00	-----	0.36	11.75	C-2049
71.51	69.00	1.05	1.00	-----	0.48	11.50	C-1955
73.16	-----	0.80	-----	-----	0.80	17.00	C-1973
70.95	69.00	1.06	1.00	-----	0.78	12.00	C-1903
71.90	69.00	0.83	1.00	-----	0.40	14.00	C-1932
67.28	67.71	1.21	1.08	-----	2.84	10.50	C-2002
70.70	65.00	*1.80	3.00	-----	0.58	14.00	C-1975
66.28	65.00	8.25	3.00	-----	0.40	13.50	C-2099
66.86	65.00	7.31	3.00	-----	0.20	-----	C-1948

*Deficient.

†Compared with registered guarantee.

**Sold at the rate of 65¢ for 49½ lbs.

TABLE III—LIME AND

Chemist's number	Name of Manufacturer and Brand	Sample Taken From—
C-1935 C-1909	BLAIR LIMESTONE CO., MARTINSBURG, W. VA. Opequon Hydrated Lime, ----- Opequon Hydrated Lime, -----	Biglersville Warehouse Co., Biglersville, Wm. Lane, Tunkhannock, -----
C-2062 C-1934	CENTRAL CHEMICAL CO., HAGERSTOWN, MD. Gro-All Hydrated Lime, ----- Gro-All Hydrated Lime, -----	Farmers Exchange, Uniontown, ----- Wolfe & Co., Inc., Mercersburg, -----
C-1976	CENTRE COUNTY LIME CO., INC., BELLEFONTE, PA. Bellefonte Agricultural Hydrated Lime, --	Clemon Smith, Nescopeck, -----
C-1905 C-2036 C-1927 C-2014 C-1981 C-2030 C-1908	CHEMICAL LIME CO., BELLEFONTE, PA. Clover Brand Agricultural Lime, ----- Clover Brand Agricultural Lime, ----- Clover Brand Agricultural Lime, ----- Clover Brand Agricultural Lime, ----- Clover Brand Agricultural Lime, ----- Clover Brand Agricultural Lime, ----- Clover Brand Agricultural Lime, -----	E. A. Beck, Lchighton, ----- E. A. Beck, Lchighton, ----- R. J. Dunham, Wellsboro, ----- Fetzer Brothers, Brookville, ----- Gates Hardware Co., Grampion, ----- E. H. Johnston, Ulster, ----- Luzerne County Cooperative Association, Inc., Wilkes-Barre, ----- Luzerne County Cooperative Association, Inc., Wilkes-Barre, ----- Reiters Mill, St. Marys, ----- Tyger Hardware Co., Rossiter, -----
C-2001 C-1929 C-1998 C-1906	Clover Brand Agricultural Lime, ----- Clover Brand Agricultural Lime, ----- Clover Brand Agricultural Lime, ----- Diamond Brand Chemically Pure Hyd- rated Lime, -----	E. A. Beck, Lchighton, -----
C-2004	COOPERATIVE G. L. F. EXCHANGE, INC., ROCHESTER, N. Y. G. L. F. Quality Hydrated Agricultural Lime, -----	Squier & Son, Tunkhannock, -----
C-2080 C-1887 C-1962 C-2064 C-2031	EVERETT-SAXTON CO., EVERETT, PA. Ft. Bedford Hydrated Lime, ----- Ft. Bedford Hydrated Lime, ----- Ft. Bedford Hydrated Lime, ----- Ft. Bedford Hydrated Lime, ----- Ft. Bedford Hydrated Lime, -----	Farmers Supply Co., Everett, ----- Gump & Co., Everett, ----- J. E. Jackson, Everett, ----- James McNelis, Hastings, ----- J. G. Simpson Estate, Huntingdon, -----
C-1985	THE LEGORE LIME COMPANY, LEGORE, MD. LeGore Hydrated Lime, -----	M. T. Harkins, Oxford, -----
C-1928 C-1959 C-2071	MERCER LIME & STONE CO., MERCER, PA. Hydrated Lime, ----- Hydrated Lime, ----- Hydrated Lime, -----	J. L. Bowersock, Punxsutawney, ----- Craft & Bowers, Big Run, ----- P. J. Oesterling & Sons, Inc., Butler, -----
C-2032 C-2052	H. E. MILLARD, ANNVILLE, PA. Sweet Arrow Hydrated Lime, ----- Sweet Arrow Hydrated Lime, -----	W. H. Dreibelbis, Shoemakersville, ----- C. A. Snyder, Andreas, -----
C-1910 C-2043	MOHAWK LIMESTONE PRODUCTS CO., MOHAWK, N. Y. Mohawk Lime Hydrate, ----- Mohawk Lime Hydrate, -----	Gay, Murray Co., Tunkhannock, ----- Coe H. Stearns, Kingsley, -----
C-1937 C-2094 C-2053	NATIONAL LIMESTONE CO., NAGINEY, PA. High Grade Hydrated Lime, ----- High Grade Hydrated Lime, ----- High Grade Hydrated Lime, -----	Belleville Flour Mills, Belleville, ----- Belleville Flour Mills, Belleville, ----- R. K. Yoder, Belleville, -----

HYDRATED LIME—Continued

Calcium Oxide		Magnesium Oxide		Carbon Dioxide	Insoluble Matter	Selling price per ton at place of selection	Chemist's number
Found	Guaranteed	Found	Guaranteed				
69.83	67.00	2.38	2.00	-----	0.88	-----	C-1935
67.14	67.00	2.17	2.00	-----	3.62	11.25	C-1909
70.38	70.00	1.71	2.00	-----	0.46	-----	C-2062
70.95	70.00	1.53	2.00	-----	0.18	-----	C-1934
72.32	69.00	0.80	1.00	-----	0.36	11.50	C-1976
71.74	69.00	0.79	1.00	-----	0.22	12.50	C-1905
71.43	69.00	1.64	1.00	-----	0.32	13.00	C-2036
72.41	69.00	0.92	1.00	-----	0.34	13.00	C-1927
72.68	69.00	0.78	1.00	-----	0.14	10.00	C-2014
72.32	69.00	0.82	1.00	-----	0.36	12.00	C-1981
73.07	69.00	0.84	1.00	-----	0.30	14.50	C-2030
72.80	69.00	0.85	1.00	-----	0.18	9.40	C-1908
71.05	69.00	0.76	1.00	-----	0.44	14.50	C-2001
72.53	69.00	1.00	1.00	-----	0.54	14.00	C-1929
70.86	69.00	0.77	1.00	-----	0.38	12.00	C-1998
73.08	72.00	0.64	1.00	-----	0.30	14.00	C-1906
*65.30	65.85	2.98	2.15	-----	5.50	12.00	C-2004
69.10	68.00	4.13	2.42	-----	0.72	-----	C-2080
69.89	68.00	3.30	2.42	-----	0.54	11.00	C-1887
70.76	68.00	2.75	2.42	-----	0.60	-----	C-1962
68.30	68.00	3.42	2.42	-----	0.50	11.00	C-2064
70.35	68.00	2.67	2.42	-----	0.46	-----	C-2031
64.24	60.00	*4.42	5.00	-----	3.30	-----	C-1985
61.04	60.00	0.77	0.80	-----	6.64	10.50	C-1928
60.65	60.00	0.71	0.80	-----	7.92	9.50	C-1999
62.68	60.00	0.56	0.80	-----	4.52	9.00	C-2071
72.66	72.50	1.60	1.15	-----	0.50	11.50	C-2072
70.74	70.00	1.75	1.75	-----	0.58	10.25	C-2082
65.74	65.85	2.61	2.15	-----	4.92	13.00	C-1910
*65.29	65.85	2.50	2.15	-----	5.68	12.50	C-2043
68.21	65.00	4.71	3.00	-----	0.48	**	C-1937
67.13	65.00	3.96	3.00	-----	1.62	-----	C-2094
65.64	65.00	4.72	3.00	-----	1.92	-----	C-2053

*Deficient.

**Sold at the rate of 55¢ for 49½ lbs.

TABLE III—LIME AND

Chemist's number	Name of Manufacturer and Brand	Sample Taken From—
	NORTH AMERICAN CEMENT CO., HAGERSTOWN, MD.	
C-1992	Berkeley Hydrated Lime, -----	D. W. Faust & Sons, Chambersburg, ---
C-1882	Berkeley Hydrated Lime, -----	Wm. Krause, Dallas, -----
	PINE CREEK LIME & STONE CO., JERSEY SHORE, PA.	
C-1926	Imperial Hydrated Lime, -----	E. H. Johnston, Ulster, -----
	ROBERT A. REICHARD, INC., ALLENTOWN, PA.	
C-1951	Reichard's Lehigh Hydrated Lime, -----	Harold Serfass, Bowmanstown, -----
C-1931	Reichard's Lehigh Hydrated Lime, -----	John A. Williams & Son, White Haven, ---
C-2100	Reichard's Lehigh Hydrated Lime, -----	John A. Williams & Son, White Haven, ---
	REYNOLDSVILLE LIME CO., INC., REYNOLDSVILLE, PA.	
C-1984	Reynoldsville Hydrated Lime, -----	I. E. McCreight, Reynoldsville, -----
	ROSE POINT STONE & LIME CO., NEW CASTLE, PA.	
C-2109	Peerless Hydrated Lime, -----	Carmichaels Milling Co., Carmichaels, --
C-2050	Peerless Hydrated Lime, -----	F. C. Leathers, Manor, -----
C-1891	Peerless Hydrated Lime, -----	Oil City Milling Co., Oil City, -----
C-2070	Peerless Hydrated Lime, -----	I. B. Shoup, Marienville, -----
C-2061	Rose Point Hydrated Lime, -----	Carmichaels Milling Co., Carmichaels, --
C-1986	Rose Point Hydrated Lime, -----	Fombell Coal & Supply Co., New Castle, ---
C-1936	Rose Point Hydrated Lime, -----	Hoburg Brothers, Etna, -----
C-1890	Rose Point Hydrated Lime, -----	Jefferson Flour & Feed Co., Punxsu- tawney, -----
	THE SCIOTO LIME & STONE CO., DELAWARE, OHIO.	
C-2060	Clover Grower Hydrated Lime, -----	Grover C. Hughes, Waynesburg, -----
	STANDARD CHEMICAL WORKS, INC., READING, PA.	
C-1940	Snowflake Brand Hydrated Lime, -----	J. M. Glingrich, Palmyra, -----
C-1904	Snowflake Brand Hydrated Lime, -----	Leighton Hardware Co., Leighton, --
C-2093	Snowflake Brand Hydrated Lime, -----	Leighton Hardware Co., Leighton, --
C-1912	Snowflake Brand Hydrated Lime, -----	Burton Williams, North Mehoopany, ---
C-2037	Snowflake Brand Hydrated Lime, -----	Edwin Wolfe, Pine Grove, -----
	STEACY & WILTON, HANOVER, PA.	
C-1879	Sterling Brand Hydrated Lime, -----	Baltimore Fertilizer Co., Chambersburg, ---
C-1922	Sterling Brand Hydrated Lime, -----	Elwood R. Chambers, Elkview, -----
C-1901	Sterling Brand Hydrated Lime, -----	Herman & Wetzel, Selinsgrove, -----
C-2011	Sterling Brand Hydrated Lime, -----	Herman & Wetzel, Selinsgrove, -----
	UNIVERSAL GYPSUM & LIME CO., CHICAGO, ILL.	
C-1885	Palmer Hydrated Lime, -----	M. C. Deitz's Sons, Mechanicsburg, ---
C-1886	Palmer Hydrated Lime, -----	Dillsburg Grain & Milling Co., Dillsburg, ---
C-1954	Palmer Hydrated Lime, -----	Moscow Milling Co., Moscow, -----
C-2092	Palmer Hydrated Lime, -----	L. A. Stigerwalt, Andreas, -----
	VALLEY VIEW LIME COMPANY, BELLEFONTE, PA.	
C-1982	Clover Leaf Hydrated Lime, -----	Sandri & Lezzer, Curwensville, -----
	VERMARCO LIME COMPANY, WEST RUTLAND, VERMONT.	
C-2068	Vermarco Agricultural Hydrated Lime, --	Samuel Entrot, Uniondale, -----

HYDRATED LIME—Continued

Calcium Oxide		Magnesium Oxide		Carbon Dioxide	Insoluble Matter	Selling price per ton at place of selection	Chemist's number
Found	Guaranteed	Found	Guaranteed				
71.60	70.00	1.82	2.00	-----	0.22	-----	C-1992
71.01	70.00	1.57	2.00	-----	0.30	13.50	C-1882
61.54	60.00	3.50	3.35	-----	7.12	15.00	C-1926
69.38	68.00	2.27	0.50	-----	0.84	14.00	C-1951
69.22	68.00	2.19	0.50	-----	1.60	13.00	C-1931
71.93	68.00	1.37	0.50	-----	0.34	12.50	C-2109
*51.32	60.00	1.27	1.00	-----	2.00	10.50	C-1984
56.97	55.00	*1.60	1.50	-----	10.14	8.85	C-2109
58.23	55.00	1.56	1.50	-----	9.58	**	C-2050
61.32	55.00	1.89	1.50	-----	8.14	10.20	C-1891
60.60	55.00	*0.91	1.50	-----	7.08	10.25	C-2070
60.25	55.00	*0.96	1.50	-----	7.16	9.35	C-2061
57.00	55.00	1.02	1.50	-----	8.72	***	C-1986
58.18	55.00	1.03	1.50	-----	7.88	10.75	C-1936
58.07	55.00	1.14	1.50	-----	11.52	11.00	C-1890
67.31	-----	†*5.79	-----	-----	1.02	8.90	C-2060
65.41	65.00	6.06	6.00	-----	1.04	****	C-1940
*61.15	65.00	14.67	6.00	-----	2.08	13.00	C-1904
*59.96	65.00	16.18	6.00	-----	1.82	13.00	C-2093
*60.09	65.00	14.74	6.00	-----	1.78	13.00	C-1912
60.87	60.00	*4.41	6.00	-----	3.90	-----	C-2037
69.78	67.00	*2.33	5.00	-----	0.76	-----	C-1879
71.06	67.00	*2.95	5.00	-----	0.68	13.00	C-1922
71.12	67.00	*2.60	5.00	-----	0.30	12.00	C-1901
72.34	67.00	*2.01	5.00	-----	0.66	12.00	C-2011
70.78	68.00	3.15	2.50	-----	0.20	-----	C-1885
70.22	68.00	2.93	2.50	-----	0.32	-----	C-1886
71.18	68.00	2.07	2.50	-----	0.52	14.00	C-1954
71.25	68.00	*1.35	2.50	-----	0.80	12.00	C-2092
69.65	69.00	2.05	1.00	-----	0.76	9.85	C-1982
72.52	68.00	1.16	1.00	-----	1.40	13.00	C-2068

*Deficient.

** Sold at the rate of 75¢ for 50 lbs.

*** Sold at the rate of 65¢ for 50 lbs.

† Compared with registered guarantee.

**** Sold at the rate of 50¢ for 50 lbs.

TABLE III—LIME AND

Chemist's number	Name of Manufacturer and Brand	Sample Taken From—
C-1991	WASHINGTON BUILDING LIME CO., BALTIMORE, MD. Standard Hydrated Lime, -----	D. W. Faust & Sons, Chambersburg, --
C-2045	WEST BRANCH LIME CO., WILLIAMSPORT, PA. Clover Leaf Brand Hydrated Lime, ----	Luther Bogenrief, Mifflinburg, -----
C-2015	Clover Leaf Brand Hydrated Lime, ----	Herman Keebler, Montoursville, -----
C-1974	WHITEROCK QUARRIES, BELLEFONTE, PA. Nittany H-O Hydrated Lime, -----	J. T. Davis, St. Johns, -----
C-2005	Nittany H-O Hydrated Lime, -----	Gay, Murray Co., Tunkhannock, -----
C-2079	Nittany H-O Hydrated Lime, -----	Homer City Feed Mill, Homer City, ----
C-1980	Nittany H-O Hydrated Lime, -----	Kline Flour Mills Co., Brookville, -----
C-2012	Nittany H-O Hydrated Lime, -----	Kline Flour Mills Co., Brookville, -----
C-2085	Nittany H-O Hydrated Lime, -----	A. L. Moser, Ringtown, -----
C-2052	Nittany H-O Hydrated Lime, -----	Frank G. Reamer Co., Greensburg, -----
C-1888	Nittany H-O Hydrated Lime, -----	Reynoldsville Hardware, Reynoldsville, --
C-1978	Nittany H-O Hydrated Lime, -----	M. H. Stewart, Clarksburg, -----
C-2054	Nittany H-O Hydrated Lime, -----	George Stoner, Center Hall, -----
C-1896	Nittany H-O Hydrated Lime, -----	Union City Cooperative Association, Union City, -----
C-2046	Nittany H-O Hydrated Lime, -----	H. G. Winey, Middleburg, -----
		Average, -----
	HYDRATED LIME (High Magnesia)	
C-2042	CHESTER VALLEY LIME & PRODUCTS CO., WEST CHESTER, PA. Chester Valley Hydrated Lime, -----	Abington Lumber Co., Dalton, -----
C-2038	Chester Valley Hydrated Lime, -----	W. A. Buck, Aquashicola, -----
C-2063	Chester Valley Hydrated Lime, -----	Farmers Supply Co., Phoenixville, -----
C-2025	COLGAN LIMESTONE PRODUCTS CO., COLUMBUS, OHIO. Sweet Soil Agricultural Hydrated Lime, -	G. A. Strauss, West Alexander, -----
C-1949	Sweet Soil Agricultural Hydrated Lime, -	Youngsville Milling Co., Youngsville, ----
C-2069	G. & W. H. CORSON, PLYMOUTH MEETING, PA. Corson's Hydrated Lime, -----	A. W. Kenyon, Carbondale, -----
C-2018	FRANCE LIME PRODUCTS INC., TOLEDO, OHIO. France Agricultural Hydrated Lime, ----	W. A. Clark, Conneaut Lake, -----
C-1942	France Agricultural Hydrated Lime, ----	Midland Milling & Supply Co., Midland,
C-2075	France Agricultural Hydrated Lime, ----	Midland Milling & Supply Co., Midland,
C-1941	KELLEY ISLAND LIME & TRANSPORT CO., CLEVELAND, OHIO. Agrispray Lime, -----	Midland Milling & Supply Co., Midland,
C-2020	Tiger Agricultural Hydrated Lime Marble- head, -----	Lottsville Milling & Supply Co., Bear Lake, -----
C-2076	Tiger Agricultural Hydrated Lime White Rock, -----	Midland Milling & Supply Co., Midland,
C-2111	Tiger Agricultural Hydrated Lime White Rock, -----	Midland Milling & Supply Co., Midland,
C-1880	NATIONAL GYPSUM CO., BUFFALO, N. Y. Luckey Agricultural Hydrated Lime, ----	F. W. Woolworth Co., Wilkes-Barre, ----
C-1993	Luckey Agricultural Hydrated Lime, ----	F. W. Woolworth Co., Wilkes-Barre, ----

HYDRATED LIME—Continued

Calcium Oxide		Magnesium Oxide		Carbon Dioxide	Insoluble Matter	Selling price per ton at place of selection	Chemist's number
Found	Guaranteed	Found	Guaranteed				
70.46	70.00	*1.22	2.00	-----	0.76	-----	C-1991
66.45	60.00	2.29	2.00	-----	1.98	-----	C-2045
66.26	60.00	2.06	2.00	-----	2.54	12.00	C-2015
72.77	70.00	0.77	0.55	-----	0.82	13.00	C-1974
72.28	70.00	0.67	0.55	-----	0.34	12.50	C-2005
72.27	70.00	0.88	0.55	-----	0.72	10.00	C-2079
71.76	70.00	0.77	0.55	-----	0.82	11.75	C-1980
72.34	70.00	0.77	0.55	-----	0.30	11.75	C-2012
71.14	70.00	0.83	0.55	-----	0.96	11.50	C-2085
72.35	70.00	0.65	0.55	-----	0.58	11.75	C-2062
70.62	70.00	0.74	0.55	-----	0.86	11.60	C-1888
71.82	70.00	0.81	0.55	-----	1.04	-----	C-1978
71.19	70.00	0.89	0.55	-----	0.76	-----	C-2054
71.40	70.00	0.62	0.55	-----	0.18	12.00	C-1896
71.66	70.00	0.73	0.55	-----	1.00	**	C-2046
68.60	-----	2.20	-----	-----	1.84	11.82	-----
47.69	46.50	32.00	31.00	-----	0.94	13.35	C-2042
46.56	46.50	31.98	31.00	-----	1.50	11.20	C-2038
47.98	46.50	31.99	31.00	-----	0.94	12.00	C-2063
48.77	47.20	33.46	32.90	-----	0.34	-----	C-2025
48.27	48.00	33.42	33.00	-----	0.42	12.00	C-1949
47.69	46.00	31.64	30.00	-----	0.70	14.00	C-2069
48.38	47.28	33.75	32.90	-----	0.38	5.50	C-2018
48.05	47.20	33.41	32.90	-----	0.46	11.00	C-1942
48.39	47.20	32.94	32.90	-----	0.76	9.00	C-2075
48.36	-----	32.91	-----	-----	0.78	11.00	C-1941
62.74	54.00	*10.39	16.00	-----	0.70	9.00	C-2020
47.75	-----	†32.62	-----	-----	0.38	9.00	C-2076
49.12	47.00	33.80	34.00	-----	0.60	8.50	C-2111
46.48	42.80	32.50	32.70	-----	0.42	**	C-1870
46.11	42.80	*31.97	32.70	-----	0.26	**	C-1998

* Deficient.

** Sold at the rate of 40¢ for 50 lbs.

† Compared with registered guarantee.

TABLE III—LIME AND

Chemist's number	Name of Manufacturer and Brand	Sample Taken From—
C-2051	THE NATIONAL LIME & STONE CO., FINDLAY, OHIO. Monarch Hydrated Agricultural Lime, --	Keystone Supply Co., Jeannette, -----
C-1996	OHIO HYDRATE & SUPPLY CO., WOODVILLE, OHIO Ohio Agricultural Hydrated Lime, -----	Farmers Exchange, Indiana, -----
C-2112	Ohio Agricultural Hydrated Lime, -----	H. F. Gelbach, Evans City, -----
C-1960	Ohio Agricultural Hydrated Lime, -----	Harmony Cereal Mills, Harmony, -----
C-1892	Ohio Agricultural Hydrated Lime, -----	Oil City Milling Co., Oil City, -----
C-2108	Ohio Agricultural Hydrated Lime, -----	West Penn Feed Co., West Brownsville, -----
C-1947	ROBERT A. REICHARD, INC., ALLENTOWN, PA. Pennsylvania Hydrated Lime, -----	W. M. Burleson, Port Alleghany, -----
C-2056	UNITED STATES GYPSUM CO., USG Agricultural Hydrated Lime (Oakfield)	H. G. Lake, Montrose, -----
C-2041	WARNER COMPANY, PHILADELPHIA, PA. Knickerbocker Hydrated Lime, -----	Builders Supply Co., Clarks Summit, ---
C-2035	Knickerbocker Hydrated Lime, -----	Lehighton Hardware Co., Lehighton, ---
C-2083	Knickerbocker Hydrated Lime, -----	Fred Nester, New Ringold, -----
C-2039	Warner's Limoid, -----	Amby A. Hettler, Lehighton, -----
C-2084	Warner's Limoid, -----	Frank Lindener, Ringtown, -----
C-1924	Warner's Limoid, -----	Fred S. Nester, New Ringgold, -----
C-1933	Warner's Limoid, -----	Robinson & Gerry, Montrose, -----
C-1952	Warner's Limoid, -----	Harold Serfass, Bowmanstown, -----
C-2040	Warner's Limoid, -----	Summit Farm Equipment Co., Clarks Summit, -----
C-1950	Warner's Limoid, -----	J. S. Wertz, Washingtonboro, -----
		Average, -----

HYDRATED LIME—Concluded

Calcium Oxide		Magnesium Oxide		Carbon Dioxide	Insoluble Matter	Selling price per ton at place of selection	Chemist's number
Found	Guaranteed	Found	Guaranteed				
*46.42	48.00	*31.00	33.50	-----	0.36	12.00	C-2051
49.68	48.00	32.21	31.70	-----	0.28	10.75	C-1996
49.91	48.00	33.41	31.70	-----	0.54	8.50	C-2112
48.61	48.00	32.70	31.70	-----	0.12	11.00	C-1960
49.59	48.00	31.33	31.70	-----	0.58	10.20	C-1892
48.84	48.00	33.00	31.70	-----	0.32	5.50	C-2108
55.33	55.00	23.30	15.00	-----	0.68	13.00	C-1947
48.62	43.00	30.20	27.00	-----	0.82	13.00	C-2056
47.69	46.50	32.24	31.00	-----	0.66	12.50	C-2041
	46.50		31.00				
47.41	to		to				
	48.00	31.73	34.00	-----	0.72	13.00	C-2035
	46.50		31.00				
	to		to				
48.04	49.00	33.73	33.00	-----	1.12	11.50	C-2083
46.90	46.50	32.96	31.00	-----	0.60		C-2039
48.27	46.50	33.26	31.00	-----	1.40	11.30	C-2084
*44.24	45.00	30.48	30.00	-----	0.94	13.00	C-1924
47.43	45.00	32.76	30.00	-----	1.02	14.00	C-1933
47.60	46.50	32.50	31.00	-----	1.22	14.00	C-1952
47.06	46.50	31.52	31.00	-----	0.62	12.50	C-2040
46.93	46.50	32.26	31.00	-----	1.04		C-1950
48.51		31.50		-----	0.69	11.12	

* Deficient.

